

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				COMPLETE IF KNOWN				
				Application Number	09/386,734			
				Confirmation Number				
				Filing Date	8/31/99			
				First Named Inventor	Ritzdorf			
				Group Art Unit	1742			
				Examiner Name	G. Wyszomierski			
Sheet	1	of	3	Attorney Docket No.	29195.8162US1			
U.S. PATENT DOCUMENTS								
EXAMINER INITIALS	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
		NUMBER	Kind Code (if known)					
Qu	AA	5,972,192		Dubin <i>et al.</i>	10/26/99			
	AB	4,250,004		Miles <i>et al.</i>	2/10/81			
	AC	3,894,918		Corby <i>et al.</i>	7/15/75			
	AD	2,443,599		Allan E. Chester	6/22/48			
	AE	5,605,615		Goolsby <i>et al.</i>	2/25/97			
	AF	6,280,183		Mayur <i>et al.</i>	8/28/01			
Qu	AG	6,278,089		Young <i>et al.</i>	8/21/01			
FOREIGN PATENT DOCUMENTS								
EXAMINER INITIALS	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS								
EXAMINER INITIALS	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume/issue number(s), publisher, city and/or country where published.						
Qu	AH	NGUYEN <i>et al.</i> , "Interconnect and Contact Metallization", Eds. H.S. Rathore, G.S. Mathan, C. Plougonven and C.C. Schuckert, PV 97-31, The Electrochemical Society, Inc., Pennington, NJ						
	AI	FOULKE, D.G., in "Gold Plating Technology", Reid, F.H. and Goldie, W., p.67, Electrochemical Publication Limited, British Isles (1996).						
	AJ	TOMOV, V., STOYCHEV, D.S., VITANOVA, I.B., "Recovery And Recrystallization Of Electrodeposited Bright Copper Coatings At Room Temperature. II. X-Ray Investigation Of Primary Recrystallization," <i>Journal of Applied Electrochemistry</i> , 15, 887-894. Chapman and Hall Ltd. (1985).						
	AK	RITZDORF, T., GRAHAM, L., JIN, S., MU, C. and FRASER, D., "Self-Annealing of Electrochemically Deposited Copper Films in Advanced Interconnect Applications," Proceedings of the IEEE 1998 International Interconnect Technology Conference, San Francisco, CA (June 1-3, 1998).						
	AL	DUBIN, V.M., SHACHAM-DIAMAND, Y., ZHAO, B., VASUDEV, P.K. and TING, C.H., "Sub-Half Micron Electroless Cu Metallization," Materials Research Society Symposium Proceedings, Vol. 427, San Francisco, (1996).						
Qu	AM	COOK, M. and RICHARDS, T., "The Self-Annealing of Copper," <i>J. Inst. Metals</i> , vol. LXX, pp. 159-173 (1943).						

G. Wyszomierski 12/17/01

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

COMPLETE IF KNOWN

Application Number 09/387,577

Confirmation Number 1242

Filing Date 8/31/99

First Named Inventor Ritzdorf

Group Art Unit 1741

Examiner Name W.T. Leader

Attorney Docket No. 29195.8162US1

RECEIVED
OCT - 3 2001
TECHNOLOGY CENTER 1700

Sheet	2	of	3	Attorney Docket No.	29195.8162US1	ENTRUSTED 2001 1700
	AA	MAK, C.Y., "Electroless Copper Deposition on Metals and Metal Silicides," Materials Research Society Bulletin, (August 1994).				
	AB	HOGAN, B.M., "Microstructural Stability of Copper Electroplate," (citation unknown but believed to be published more than one year before the date of this patent application).				
	AC	STOYCHEV, D., VITANOVA, I. VIEWEGER, U., "Influence of the Inclusions in Thick Copper Coatings on Their Physico – Mechanical Properties," CHECK REFERENCES				
	AD	STOYCHEV, D.S., and AROYO, M.S., 'The Influence of Pulse Frequency on the Hardness of Bright Copper Electrodeposits,' <i>Plating & Surface Finishing</i> , pp. 26-28 (date unknown but believed to be published more than one year before the date of this patent application).				
	AE	STOYCHEV, D.S., and AROYO, M.S., 'On the Influence of Pulse Frequency on the Hardness of Bright Copper Electrodeposits, (citation unknown but believed to be published more than one year before the date of this patent application).				
	AF	STEIN, B., "A Practical Guide to Understanding, Measuring and Controlling Stress in Electroformed Metals,' presented at the AESF Electroforming Symposium, Las Vegas, NV (March 1996).				
	AG	SANCHEZ, J. JR., BESSER, P.R., and FIELD, D.P., "Microstructure of Damascene Processed Al-Cu Interconnects for Integrated Circuit Applications," presented at the Fourth International Workshop on Stress Induced Phenomena in Metallizations, Tokyo, Japan (June 1997).				
	AH	SANCHEZ, J. JR. and BESSER, P.R., "Modelling Microstructure Development in Trench-Interconnect Structures," submitted to International Interconnect Technology Conference, Sunnyvale, CA. (June 1998).				
	AI	FIELD, D.P., SANCHEZ, J. JR., BESSER, P.R., DINGLEY, D.J., "Analysis of Grain-Boundary Structure in Al-Cu Interconnects," <i>J. Appl. Phys.</i> , 82(5) (September 1, 1997).				
	AJ	GUPTA, D., "Comparative Cu Diffusion Studies in Advanced Metallizations of Cu and Al-Cu Based Thin Films," Materials Research Society Symposium Proceedings, San Francisco, CA (April 1994).				
	AK	MEGAW, H.D. and STOKES, A.R., "Breadths of X-Ray Diffraction Lines and Mechanical Properties of Some Cold-Worked Metals," <i>J. Inst. Metals</i> , vol. LXXI, pp. 279-289 (1944)				
AL	THOMPSON, C.V., and KNOWLTON, B.D., "Designing Circuits and Processes to Optimize Performance and Reliability: Metallurgy Meets Tcad," <i>Microelectronics and Reliability</i> , 36, P. 1683 (1996).					
AM	CAREL, R., THOMPSON, C.V., FROST, H.J., <i>Material Research Society Symposium</i> , Vol. 343, Materials Research Society (1994).					
AN	FLORO, J.A., CAREL, R. and THOMPSON, C.V., "Energy Minimization During Epitaxial Grain Growth: Strain vs. Interfacial Energy," <i>Material Research Society Symposium</i> , Vol. 317, Materials Research Society (1994).					
AO	PLÖTNER, M., URBANSKY, N., PREUSZ, A. and WENZEL, C., "Control of Mechanical Stresses and their Temperature Dependence in PVD CU Films," presented at Adv. Metalliz. & Interconn. Syst. ULSI Applic. San Diego (1997).					
	AP	WONG, CHEE. C., SMITH, H.I., and THOMPSON, C.V., "Secondary Grain Growth and Graphoepitaxy in Thin Au Films on Submicrometer-Period Gratings," <i>Material Research Society Symposium Proc</i> , Vol. 47, Materials Research Society (1985).				

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				COMPLETE IF KNOWN	
				Application Number	09/387,577
				Confirmation Number	1242
				Filing Date	8/31/99
				First Named Inventor	Ritzdorf
				Group Art Unit	1741
				Examiner Name	W.T. Leader
Sheet	3	of	3	Attorney Docket No.	29195.8162US1
Cur	AA	THOMPSON, C.V., and SMITH, H.I., "Secondary Grain Growth in Thin Films." <i>Materials Research Society Symposium Proc.</i> , Vol. 57, Materials Research Society (1987).			
	AB	WONG, C.C., SMITH, H.I., and THOMPSON, C.V., "Room Temperature Grain Growth in Thin Au Films from Grain Boundary Structure and Related Phenomena, supplement to <i>Transactions of Japanese Institute of Metals</i> , 27, p. 641 (1986).			
	AC	THOMPSON, C.V., "Observations of Grain Growth in Thin Films," from <i>Microstructural Science for Thin Film Metalizations in Electronics Applications</i> , eds. J. Sanchez, D.A. Smith and N. DeLanerolle, The Minerals, Metals & Materials Society (1988).			
	AD	FROST, H.J., THOMPSON, C.V., and WALTON, D.T., "Abnormal Grain Growth in Thin Films Due to Anisotropy of Free-Surface Energies," <i>Materials Science Forum</i> , Vols. 94-96, pp. 543-550, Trans Tech Publications, Switzerland (1992).			
	AE	FROST, H.J. and THOMPSON, C.V., "Microstructural Evolution in Thin Films," presented at the Symposium on Computer Simulation of Microstructural Evolution, Toronto, Canada, October 15 (1985).			
	AF	FROST, H.J. THOMPSON, C.V., and WALTON, D.T., "Grain Growth Stagnation and Abnormal Grain Growth in Thin Films," presented at TMS-AIME Fall Meeting, Indianapolis, IN (1989).			
	AG	REED-HALL, et al., "Physical Metallurgy Principles," pp. 270, 286 and 287, 83 rd Ed. (1991).			
	AH	STOYCHEV, D.S., and AROYO, M.S., "On the Influence of Pulse Frequency upon the Hardness of Bright Copper Electrodeposits," (citation unknown but believed to be published more than one year before the date of this patent application).			
	AI	FROST, H.J. and THOMPSON, C.V., "Modeling of Optical Thin Films," reprint from Proceedings of SPIE (International Society for Optical Engineering, San Diego, CA 1987, printed by the Society of Photo-Optical Instrumentation Engineers (1988).			
Cur	AJ	WALTON, D.T., FROST, H.J. and THOMPSON, C.V., "Computer Simulation of Grain Growth in Thin-Film Interconnect Lines," <i>Mat. Res. Soc. Symp. Proc.</i> , vol. 225 (1991).			
EXAMINER				DATE CONSIDERED	
G Wysocki				12/17/01	
* EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).					